



PATENT ABSTRACTS OF JAPAN

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(54) CONTROLLER FOR ULTRASONIC MOTOR

(57) Abstract:

PURPOSE: To stably start an ultrasonic motor at a low voltage by operating frequency sweeping means at the time of starting the motor, stopping the sweeping after a predetermined speed detection signal is outputted, and operating speed control means.

CONSTITUTION: A controller for an ultrasonic motor 6 is composed of a variable oscillator control circuit 1 for controlling the oscillation frequency of a variable oscillator 2 at the time of starting, etc., and a speed control loop is formed of a speed sensor 11, a F/V conversion circuit 12, a compensation filter 13, power amplifier circuits 4-5, and the motor 6. Further, a phase control loop is formed of a voltage detector 7, a current detection circuit 8, a phase comparator 9, a compensation filter 10, a variable oscillator 2, a 90° phase shifter 3, etc. The control circuit 1 outputs a control signal (a) varying to a low voltage from a high voltage as a time goes during a period until the fact that a moving body

25 arrives at a predetermined speed is detected by a speed detector 14 and sweeps from a high frequency to a low frequency at the time of starting the motor. Then, when it arrives at a predetermined speed, the speed control loop is closed.

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